List of completed projects Xenia Bogomolec

1. System-Development and Network-Programming (TCP/IP-, HTTP- and WebSocket-Protocols in Python, AngularJS, jQuery, PostgreSQL)

since Dezember 2015
Password-Manager as browser-app with local webserver in Python.

- User defined encrypted password list
- Accessable in browser, decrypted only for copy and paste

All information systems below are active at 17 various public transport enterprises, like SVHI Hildesheim, Verkehrs-und Tarif-Verbund Stuttgart, Pforzheimfährtbus, Busbetriebe Warschau, ...
All Login-Procedures are implemented according to Challenge-Response-Authentication.

January 2014 – Dezember 2015
Testing, maintenance, installations and feature-extensions of systems below.

February 2015 – June 2015
Re-design according to design-guide and refactoring of browser modules into globally usable web-components. (via AngularJS-directives,and SCSS-configuration file).

November 2014 – January 2015
VDV-Interface: HTTP-server and -client, interface between external HTTP-server and display-information-systems according to german VDV453-norm.

- Preparation and transmission of display- and station-specific timetables and additional informations.

July 2014 – September 2014
SIRI-Client: HTTP-Client API between HTTP-Servers and databases according to european SIRI-norm.

- Preparation and transmission of display- and station-specific timetables and additional informations.
- Database-design

March 2014 - June 2014
Supervisor: TCP/IP-client-server-system to monitor all running systems on clients physical servers.

- Local supervisors
- Central server with integrated webserver for overview table in browser
- Alert emails on suspicious behaviour

May 2014 - July 2014
QNET-Server: TCP/IP-API between databases, prognosis-systems and displays.

- Preparation and transmission of display- and station-specific timetables and additional informations.

Febuary 2014 - May 2015
Display-Module: Webserver with integrated database-API, API to display servers and browser-app

- Websocket for dynamic contents
- Overviewtable of displays
- Live-streaming of displays in browser-app
- Display-screenshots in browser-app
- Remote-control of displays

August 2013 – December 2013
Service-Monitoring-Module: Webserver with integrated database-API, browser-app and API to external prognosis-system.

- Overviewtable for running trips
- Connection-tables
- Graphical line views
- Single trip tables
- Archiv-Function for ended trips
- Form to edit statistics

2. WEB (Python, AnguarJS, Javascript, HTML, SCSS, PHP, Wordpress)

January 2016
Own Homepage http://coder.tjingwan.com

August 2015 – December 2015
Project Malooja: Wordpress-Application with integrated Blog, Onepager and Web-Shop

- Child Templating
- SCSS with configuration-file according to style-guide of www.quellgebiet.ch
- Functional extensions in javascript
- Own Social-Sharing Widgets
- Plugin-Adaptions

June 2015 – July 2015
Wordpress Child-Templating for V-ZUG AG: http://blog.vzug.com

- Child Templating
- CSS according to style-guide of www.quellgebiet.ch

- Functional extensions in javascript
- Own Social-Sharing Widgets
- Plugin-Adaptions

January 2014 – March 2014
<u>Information-Module</u>: Webserver with integrated database-API and browser-app.

- Overviewtable for edited informations
- Forms to edit informations

3. Computeralgebra (Singular, Algorithmic Algebra, Algebraic Geometry)

December 2010 – November 2012
Implementation of complex algorithms for libraries of the Computeralgebra-System Singular:

- Normalization of arithmetic surfaces
- Lipmans Desingularization-Algorithm

Both Libraries deal with transformation of singular sufaces into in largely isomorphic surfaces with better properties. Better properties in this context means, that small changes of the equation also do not change the related surface much. In an application, where equations represent an approximation of a real process, such a surface is a much more reliable information source.
All computations are polynomial.